

This listing of claims will replace all prior versions, and listings, of claims in the applications:

Listing of Claims:

Claim 1. (Currently Amended) An apparatus for automatically fixing sutures used in the surgical replacement of a heart valve, comprising:

a first cylinder having a first end and a second end and an interior surface and an exterior surface;

first securing means for securing fixing suture formed on said exterior surface adjacent to said second end of said first cylinder; and

a second cylinder having second securing means for securing fixing suture formed on an interior surface of said second cylinder, such that said second securing means corresponds to and is adapted to fixedly engage engages said first securing means for securing fixing suture, wherein said first securing means and said second securing means are adapted to secure fixing sutures therebetween.

Claim 2. (Currently Amended) The apparatus of claim 1, wherein said first securing means is an annular lip and said second securing means is an annular groove.

Claim 3. (Currently Amended) The apparatus of claim 1, wherein said first securing means is an annular groove and said second securing means is an annular lip.

Claim 4-8. (Canceled).

Claim 9. (Currently Amended) An apparatus for automatically fixing sutures used in the surgical replacement of a heart valve, comprising:

a first cylinder having a first end and a second end and an interior surface and an exterior surface;

first securing means formed on said exterior surface adjacent to said second end of said first cylinder;

a second cylinder having second securing means formed on an interior surface of said second cylinder, such that said second securing means corresponds to and is adapted to fixedly engage said first securing means, wherein said first securing means and said second securing means are adapted to secure fixing sutures therebetween; and ~~The apparatus of a claim 1, further comprising:~~

a guiding rod including a rod end piece formed at a first end of said rod, said rod end piece having a plurality of support brackets extending from said rod end piece and a guiding ring

affixed to said support brackets, said ring being adapted to engage said second end of said first cylinder, wherein said interior surface of said second cylinder slidably engages an exterior surface of each of said support brackets;

a securing member including a rod sleeve which slidably engages said guiding rod, and a sleeve end piece formed on a first end of said rod sleeve, said sleeve end piece having plurality of securing brackets, which are adapted to engage said second cylinder and which are positioned to interfit with said support brackets; and

means for sliding said securing member on said guiding rod, whereby said second securing means of said second cylinder are urged into engagement with said first securing means on said first cylinder.

Claim 10. (Previously Presented) The apparatus of claim 9, wherein said means for sliding comprises a handle, said handle affixed to a second end of said guiding rod and including a grip having a levered projection, such that when said grip is pressed against said handle, said levered projection contacts said securing member and urges said securing member toward said rod end piece.

Claim 11. (Original) The apparatus of claim 9, wherein at least one eyelet is formed on each of said supporting brackets for receiving at least one suture, whereby said guiding ring is guided into contact with said second end of said first cylinder.

Claim 12. (Currently Amended) An apparatus for automatically fixing sutures used in the surgical replacement of a heart valve, comprising:

a first cylinder having a first end and a second end and an interior surface and an exterior surface and a valve sleeve including an annular cuff;

wherein said sleeve surrounds said exterior surface adjacent to said first end of said first cylinder, and wherein first ~~securing~~ means for securing fixing suture are formed on said exterior surface adjacent to said second end of said first cylinder; and

a second cylinder having second ~~securing~~ means for securing fixing sutures formed on an interior surface of said second cylinder, such that said second ~~securing~~ means corresponds to and ~~are adapted to fixedly engage engages~~ said first ~~securing~~ means for securing fixing sutures, wherein said first ~~securing~~ means and said second ~~securing~~ means ~~are adapted to secure~~ fixing sutures therebetween.

Claim 13. (Currently Amended) The apparatus of claim 12, wherein said first securing means is an annular lip and said second securing means is an annular groove.

Claim 14. (Currently Amended) The apparatus of claim 12, wherein said first securing means is an annular groove and said second securing means is an annular lip.

Claim 15. (Previously Presented) The apparatus of claim 12, wherein said cuff is manufactured from a surgical fabric.

Claim 16. (Currently Amended) An apparatus for automatically fixing sutures used in the surgical replacement of a heart valve, comprising:

a first cylinder having a first end and a second end and an interior surface and an exterior surface and a valve sleeve including an annular cuff;

wherein said sleeve surrounds said exterior surface adjacent to said first end of said first cylinder, and wherein first securing means are formed on said exterior surface adjacent to said second end of said first cylinder;

a second cylinder having second securing means formed on an interior surface of said second cylinder, such that said second securing means corresponds to and are adapted to fixedly engage said first securing means, wherein said first securing means and said second securing means are adapted to secure fixing sutures therebetween; and ~~The apparatus of a claim 12, further comprising:~~

a guiding rod including a rod end piece formed at a first end of said rod, said rod end piece having a plurality of support brackets extending from said rod end piece and a guiding ring affixed to said support brackets, said ring being adapted to engage said second end of said first cylinder, wherein said interior surface of said second cylinder slidably engages an exterior surface of each of said support brackets;

a securing member including a rod sleeve which slidably engages said guiding rod, and a sleeve end piece formed on a first end of said rod sleeve, said sleeve end piece having a plurality of securing brackets, which are adapted to engage said second cylinder and which are positioned to interfit with said support brackets; and

means for sliding said securing member on said guiding rod, whereby said second securing means of said second cylinder are urged into engagement with said first securing means on said first cylinder.

Claim 17. (Previously Presented) The apparatus of claim 16, wherein said means for sliding comprises a handle, said handle affixed to a second end of said guiding rod and including a grip having a levered projection, such that when said grip is pressed against said handle, said levered projection contacts said securing member and urges said securing member toward said rod end piece.

Claim 18. (Previously Presented) The apparatus of claim 16, wherein at least one eyelet is formed on each of said supporting brackets for receiving at least one suture, whereby said guiding ring is guided onto said first cylinder.

Claim 19. (Currently Amended) An apparatus for automatically fixing sutures used in the surgical replacement of a heart valve, comprising:

a first cylinder having a first end and a second end and an interior surface and an exterior surface;

a valve sleeve comprising an annular cuff surrounding said exterior surface adjacent to said first end of said first cylinder,

first securing means for securing fixing suture formed on said exterior surface adjacent to said second end of said first cylinder; and

a second cylinder having second securing means for securing fixing sutures formed on an interior surface of said second cylinder, such that said second securing means corresponds to and ~~are adapted to~~ fixedly engage engages said first securing means for securing fixing sutures, wherein said first securing means and said second securing means ~~are adapted to~~ secure fixing sutures therebetween.

Claim 20. (Currently Amended) The apparatus of claim 19, wherein said first securing means is an annular lip and said second securing means is an annular groove.

Claim 21. (Currently Amended) The apparatus of claim 19, wherein said first securing means is an annular groove and said second securing means is an annular lip.

Claim 22. (Currently Amended) An apparatus for automatically fixing sutures used in the surgical replacement of a heart valve, comprising:

a first cylinder having a first end and a second end and an interior surface and an exterior surface;

a valve sleeve comprising an annular cuff surrounding said exterior surface adjacent to said first end of said first cylinder,

first securing means formed on said exterior surface adjacent to said second end of said first cylinder;

a second cylinder having second securing means formed on an interior surface of said second cylinder, such that said second securing means corresponds to and are adapted to fixedly engage said first securing means, wherein said first securing means and said second securing means are adapted to secure fixing sutures therebetween; and ~~The apparatus of a claim 19, further comprising:~~

a guiding rod including a rod end piece formed at a first end of said rod, said rod end piece having a plurality of support brackets extending from said rod end piece and a guiding ring affixed to said support brackets, said ring being adapted to engage said second end of said first cylinder, wherein said interior surface of said second cylinder slidably engages an exterior surface of each of said support brackets;

a securing member including a rod sleeve which slidably engages said guiding rod, and a sleeve end piece formed on a first end of said rod sleeve, said sleeve end piece having a plurality of securing brackets, which are adapted to engage said second cylinder and which are positioned to interfit with said support brackets; and

means for sliding said securing member on said guiding rod, whereby said second securing means of said second cylinder are urged into engagement with said first securing means on said first cylinder.

Claim 23. (Previously Presented) The apparatus of claim 22, wherein said means for sliding comprises a handle, said handle affixed to a second end of said guiding rod and including a grip having a levered projection, such that when said grip is pressed against said handle, said levered projection contacts said securing member and urges said securing member toward said rod end piece.

Claim 24. (Original) The apparatus of claim 22, wherein at least one eyelet is formed on said supporting brackets for receiving at least one suture, whereby said guiding rod is directed to said first cylinder.

Claim 25-42. (Canceled).

Claim 43. (Currently Amended) An apparatus for automatically fixing sutures used in the surgical replacement of a heart valve, comprising:

a first cylinder having an exterior surface;

a second cylinder having an interior surface; and

means for securing fixing sutures and for securing said exterior surface of said first cylinder to said interior surface of said second cylinder, wherein said means for securing comprises an annular groove formed on said exterior surface of said first cylinder and an annular lip formed on said interior surface of said second cylinder, and wherein said ~~first securing means~~ annular groove and said ~~second securing means~~ are adapted to secure fixing annular lip fix sutures therebetween.